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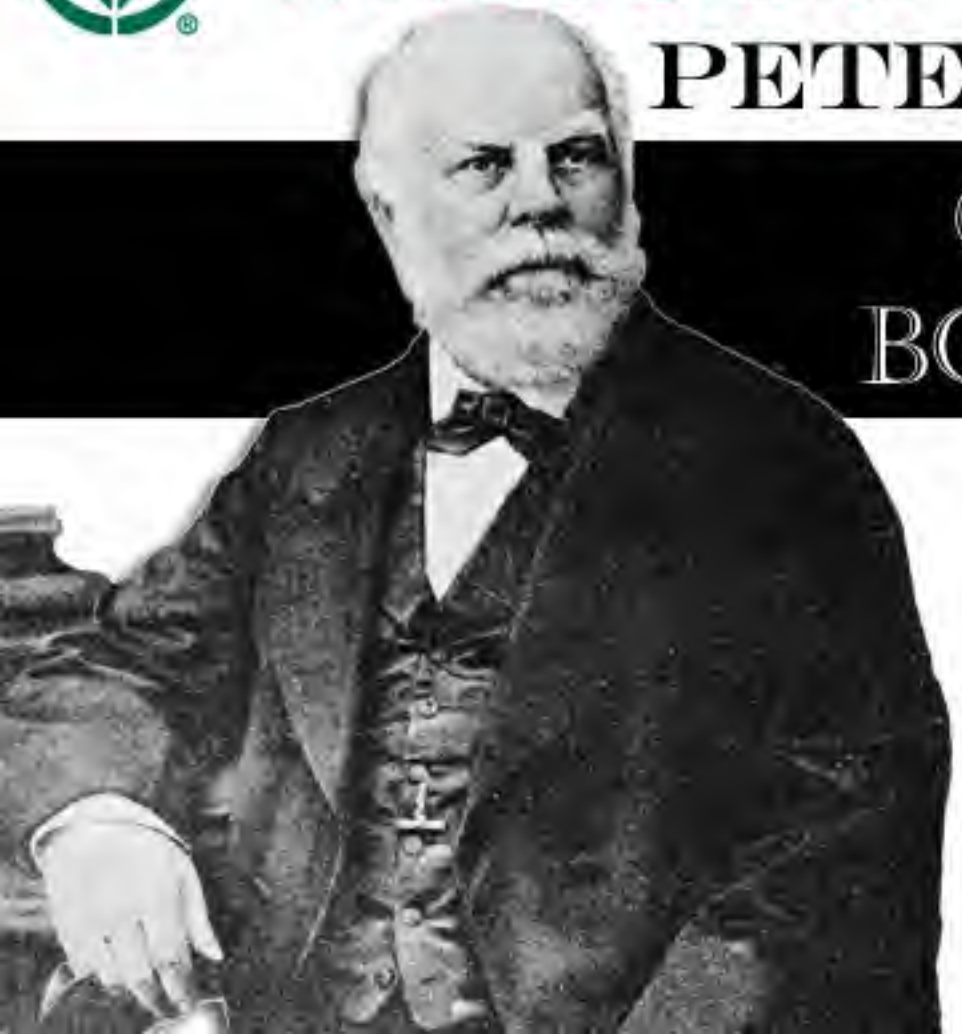
George Engelmann Botanical Notebooks



Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

Juniperus occidentalis

Sierra Valley California

J. G. Lemmon writes:

The tree [from R. R. Specimen of wood Branch & fruit are sent] grew near my home [5000–6000 ft] was 33 feet high, 3 feet 2 inches thick and about 210 years old

Engineer Office, U. S. Army,

417 PINE STREET,

Saint Louis, Mo. Feb 12 1875

Dr Geo. Engelmann

Dear Sir

I have

just received a letter

from the Coinage Dept

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GEORGE ENGELMANN PAPERS
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7

wood red, which it should be. I suppose
J. occidentalis does not have its center
wood red — While counting the rings
in the specimen of occidentalis I
noticed that the central ring is
close to the upper side — its long
diameter is 6½ inches and the center
ring is within 1 inch of the upper or
inner side when growing. There is
no bark on this inner side. I must
examine other trees carefully for I
think this is so with
think this is ~~a constant~~ nearly all
trees of J. occidentalis. I know a
cross section of the trunk is generally
some queer shape like this ∂ ○ ∂
which makes me think the growth
is nearly all on the under and out-
side of the branches. It nearly always
branches from the base and seldom
forms trees — J. Virginiana forms
symmetrical trees and good large
ones for Colorado. The wood of
J. occidentalis splits and splinters
so that a load of wood of it
when cut for the stove is in great
part slivers & splinters. It is

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1823/3

never burned in fireplaces because it has a habit of snapping Coals all over the room

with a party I went through the Canon on the ice last week — J. Virginiana was plenty but no occidentalis — Virginiana prefers a damp location and occidentalis a dry one

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We have had some very cold weather for the last two weeks and the thermometer once touched 13° below Zero — At other places it was 25 to 45° below Zero — At the same time it was warmer on top of Pikes Peak —

The cold snap came to an end Suddenly — in one hour the thermometer went from below Zero up to 44

We have not had one inch of snow and there is none on the ground at present — One evening there was a magnificent Sunset display — moon dogs & circles — the 'dogs' at the intersections; but this was spoiled by the 'Sun-dogs' and circles and rainbows of the next morning

The air was full of glistening particles of frost and the thermometer stood at about Zero, perhaps below.

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5 been below Zero for nearly two weeks
and we have had two or three Slight
Snow Storms this winter - I mention
this here to show you that the bright
green leaves of Evergreens have
had plenty of good reasons
for drying and turning brown if they
had wished to ———

Juniperus occidentalis T. S. Brandegee
April 18 1875

The berries have nearly all fallen
from those trees on the Soda Springs
Ledge that were marked. Here &
there only, can a remaining one be
found upon their branches. This
is the case with all trees of Juni=
perus occidentalis growing on the
Soda Spg. Ledge as far as I have
observed. But in other localities it
is different: Some trees have lost no
berries, some have lost half and
some nearly all. I can discover no
difference in the maturity of the
fruit. Three weeks ago, I noticed
that each tree had its peculiarity
bloom
in regard to color of the berry
; Some had no bloom; Some were

6/ Covered with bloom — making all colors between nearly the color of the berries of J. Virginiana and copper-color — The berries of each tree were uniform in color — To-day there seemed to be less variation in color which I think is owing to the late Snow storms — The bloom on berries of J. occidentalis is very easily rubbed away — I could not pick a handful of bloom covered berries without rubbing them to a copper blue. Perhaps the late snows once would have removed the bloom from those that were covered by it — On some trees the berries are shriveled and, on some are plump and large but there seems to be no difference in their maturity

J. Virginiana is not as common as occidentalis — its berries still are on the trees and covered with bloom which it is difficult to remove. It does not bear berries in such abundance as occidentalis — The wood of a specimen of — concolor has 20 rings — of J. Vir. (a limb) has 70 — occidentalis more than 50 — The Virginiana has its heart

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*

They are generally found growing in groves on the mesas or table lands but only in spots of a few acres here & there and rather scattered. Some few grow on slopes of hillsides also but not so many as in the other locality. The soil where they are found is rocky. Some of these trees grow to a hight of thirty feet, two or three feet in diameter at the base and tapering rapidly towards the top. Limbs & branches project out from near the roots all the way up. Excepting sagebrush, an occasional mountain mohagony & pine tree I saw did not find nothing else in the trees or bush line where they grow. None grow on river banks at least not here, as far as I have seen. I should not call the wood very soft. It makes excellent fuel and we prefer it to any other here. In some trees it is red right through. I have just examined a lot in my wood box, in others there is a white layer outside of the red varying from 1/2 to 2 1/2 inches in thickness. The rosin from it is very aromatic and the smell to me is very agreable. I should not think on account of the many knots in it that it would split very easily but it may. I have never tried it. When put in the fire I dont find this to crack and fly much not near as much as pine and I consider it altogether preferable

know any better. This plant grows on moist bottom land & the Indians live to a great extent on the bulbs it is camas & I think Kits. I also received the letter directed to you in a mistake and cant account for it, as I gave special directions to sent nothing whatever to you. I wish you would be kind enough to have my target examined once on the outside, if perchance some mouse has not gnawed a hole through a knot hole on one of the corners. With best regards to Mrs Engelmann & yourself I remain yours truly Chs Pender

Rec'd March 8th
an — 17

Camp Harney Oregon
Feb. 21st 1875

Doctor George Engelmann.
Dear Sir.

I received your letter of the 7th inst by last mail & will answer your questions in it as far as I can at once. The two branches of the Juniper I selected from different trees as I noticed that in one the berries were ripe while in the other they were not. It is quite possible that there are two or even three species of this Juniper found here judging from the great difference in the growth & looks of some of the trees. The tree from which I took these specimens were probably 15 feet high and 18 inches in diameter about a foot from the roots. *

over

I receive your article on some new species of Pines, Firs, Spruces & Cypresses of California & Oregon & Nevada & Arizona & New Mexico & Colorado & Utah & Wyoming & Montana & Idaho & Dakota & Nebraska & Kansas & Indian Territory & Texas & Louisiana & Arkansas & Missouri & Illinois & Indiana & Ohio & Kentucky & Tennessee & Mississippi & Alabama & Georgia & Florida & South Carolina & North Carolina & Virginia & West Virginia & Pennsylvania & New York & Vermont & New Hampshire & Maine & Massachusetts & Rhode Island & Connecticut & New Jersey & Delaware & Maryland & District of Columbia & Canada & Mexico & Central America & South America & Europe & Asia & Africa & Australia & New Zealand & Polynesia & Micronesia & Melanesia & Antarctica & Arctic & Atlantic & Pacific & Indian & Southern & Arctic & Antarctic & Mediterranean & Black & Caspian & Red & Dead & Salton & Great Salt & Utah & Sevier & Pyramid & Walker & Tahoe & Mono & Owens & Searles & Panamint & Death Valley & Mojave & Colorado Desert & Sonoran Desert & Chihuahuan Desert & Great Basin Desert & Painted Desert & Petrified Forest & Grand Canyon & Yosemite & Sequoia & Kings Canyon & Lassen Volcanic & Crater Lake & Mount Rainier & Olympic & North Cascades & Glacier & Yellowstone & Grand Teton & Rocky Mountain & Great Sand Dunes & Carlsbad Caverns & Guadalupe Mountains & Big Bend & Padre Island & Everglades & Biscayne & Dry Tortugas & Virgin Islands & Puerto Rico & Hawaii & Guam & American Samoa & Northern Mariana Islands & Palau & Marshall Islands & Federated States of Micronesia & Nauru & Kiribati & Tuvalu & Solomon Islands & Vanuatu & New Caledonia & Fiji & Tonga & Samoa & Cook Islands & French Polynesia & Pitcairn Islands & Easter Island & Galapagos Islands & Juan Fernández Islands & Tristan da Cunha & Saint Helena & Ascension Island & Bouvet Island & South Georgia & South Sandwich Islands & Falkland Islands & Heard Island & McDonald Islands & Macquarie Island & Auckland Islands & Campbell Island & Antipodes Islands & Bounty Islands & Snares Islands & Chatham Islands & Kermadec Islands & Norfolk Island & Lord Howe Island & Coral Sea Islands & Ashmore and Cartier Islands & Christmas Island & Cocos (Keeling) Islands & Heard and McDonald Islands & Australian Antarctic Territory & Ross Dependency & Peter I Island & Queen Maud Land & Enderby Land & Kemp Land & Mac. Robertson Land & Princess Elizabeth Land & Wilkes Land & Adélie Land & George V Land & Oates Land & Victoria Land & Marie Byrd Land & Ellsworth Land & Antarctic Peninsula & Graham Land & Palmer Land & Alexander Island & Ellsworth Mountains & Vinson Massif & Mount Kirkpatrick & Mount Erebus & Mount Terror & Mount Sidley & Mount Waesche & Mount Siple & Mount Takahe & Mount Murphy & Mount Casey & Mount Bailey & Mount Hornung & Mount Rea & Mount Gardner & Mount Hampton & Mount Bowman & Mount Gilbert & Mount Hayes & Mount Deborah & Mount Harper & Mount Huntington & Mount Balchen & Mount Fridtjof Nansen & Mount Sidley & Mount Waesche & Mount Siple & Mount Takahe & Mount Murphy & Mount Casey & Mount Bailey & Mount Hornung & Mount Rea & Mount Gardner & Mount Hampton & Mount Bowman & Mount Gilbert & Mount Hayes & Mount Deborah & Mount Harper & Mount Huntington & Mount Balchen & Mount Fridtjof Nansen

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Juniperus occidentalis Canon City, Dops

As berries early in November, though some trees are full yet, end of the month,

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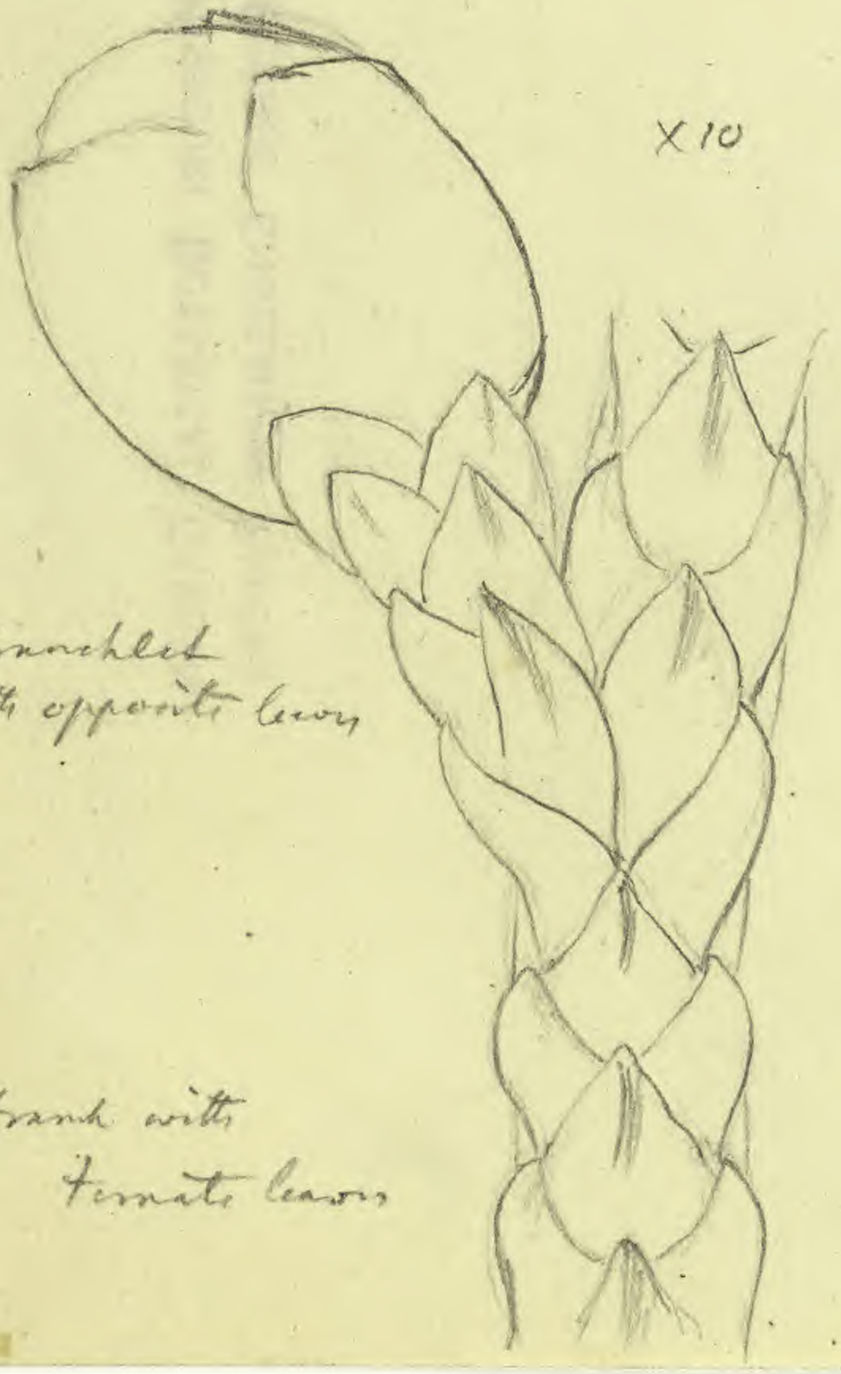
Received Payment.

Juniperus occidentalis

Jan 2d 1874

Santa Fe – small tree. 5 July 1846 Dr Wislizenus № 536.

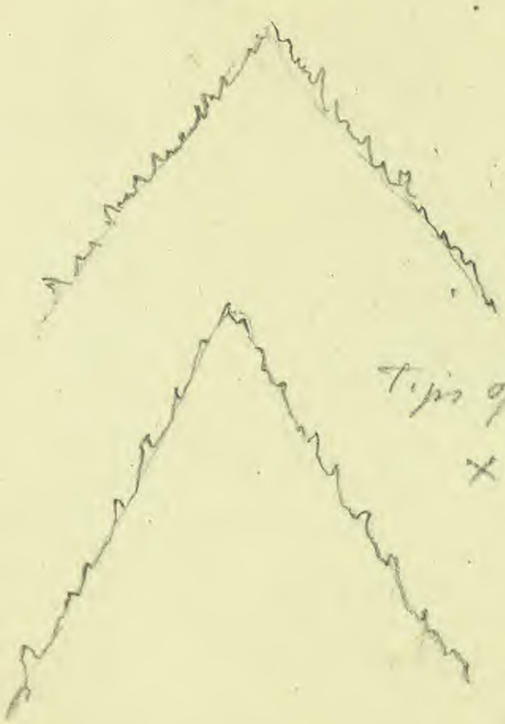
very young fruit – opposite scales,



×10

branchlet with opposite leaves

branch with ternate leaves



Tip of leaves ×60

another young fruit ×10

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ALEX. LEITCH

APOTHECARY & PHARMACEUTIST,

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Juniperus

Dec 21 1873

Pollen ×415

= 0.024 mm

834 Fendler Santa Fe in full bloom

10–15' high, common

tip of anther scale ×60

another scale ×60

base of scale

edge of scale ×280

× 10

4 anthers fully

× 10

Larger and smaller leaves of young shoot entire or nearly so

edge of long leaf ×280

"Stütz Blatt" short bracklet with opposite leaves bearing axil of opposite scales

× 10

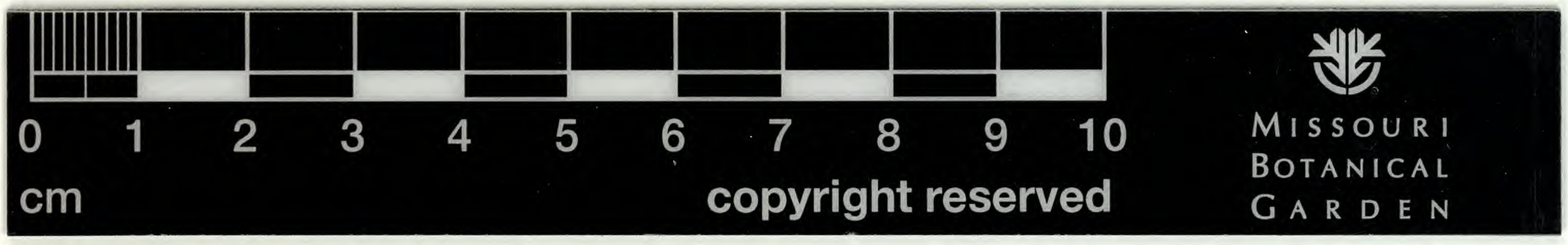
top of leaf ×60

edge of leaf ×280

× 2

open berry

× 10



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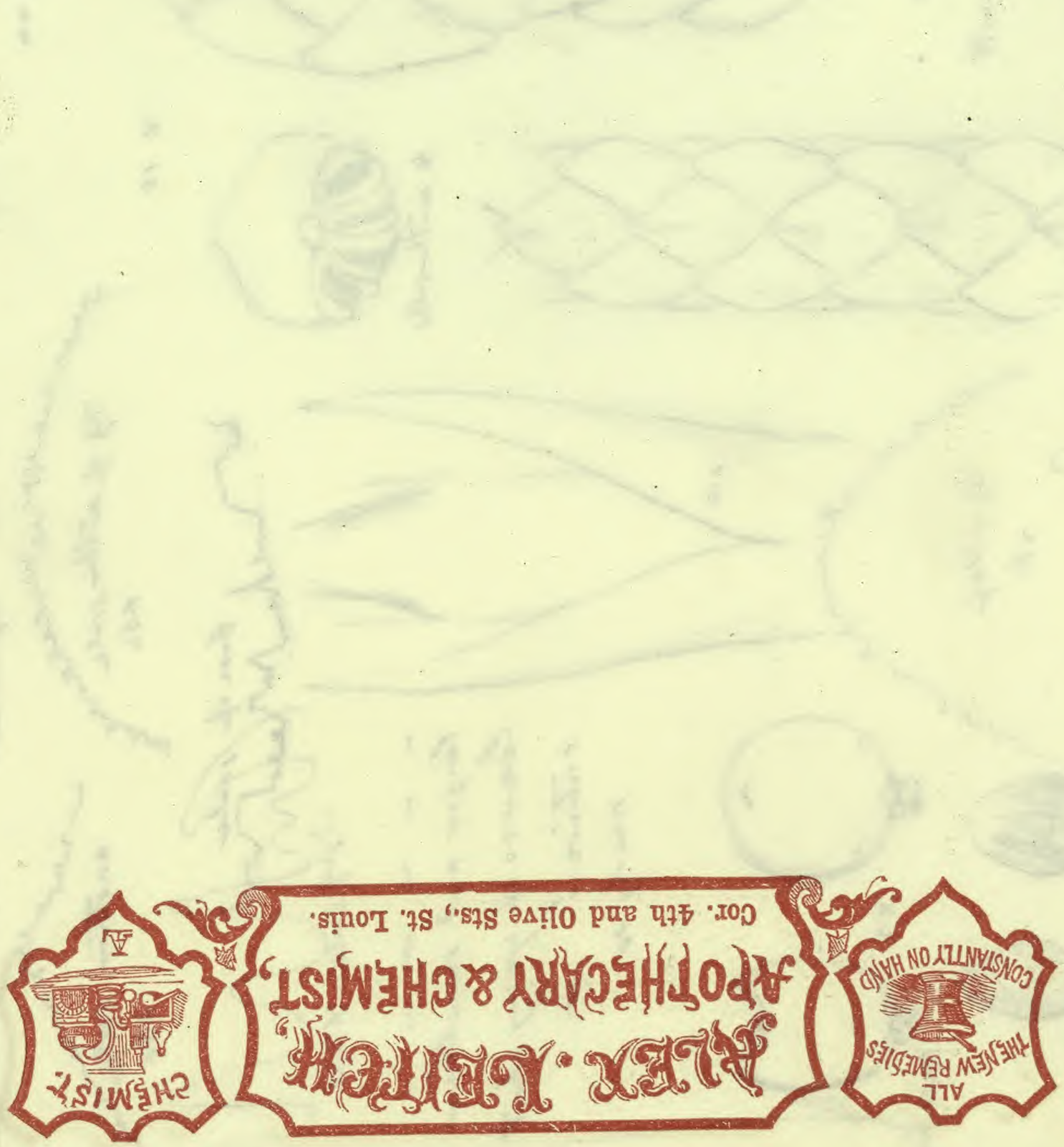

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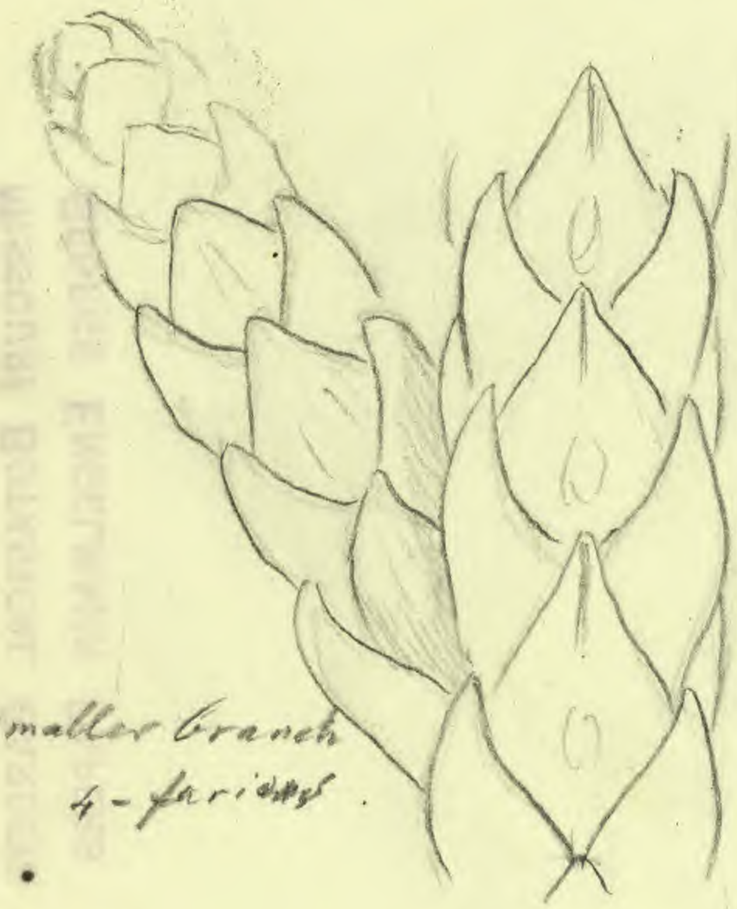
Juniperus occidentalis

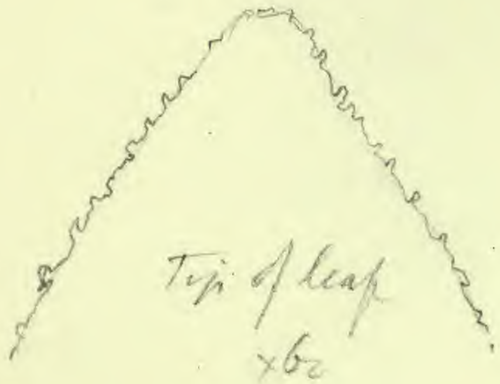
Colorado E L Greene 1873 ♀

Dec 21 1873

Sept 20



smaller branch
4-farious



Tip of leaf
×62

Side of leaf
×280

larger branch 6-farious

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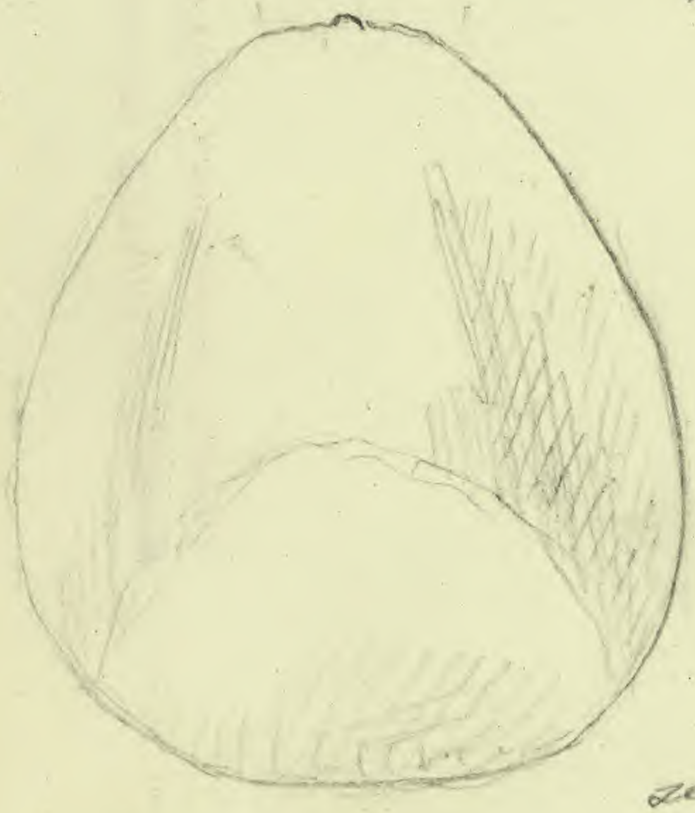
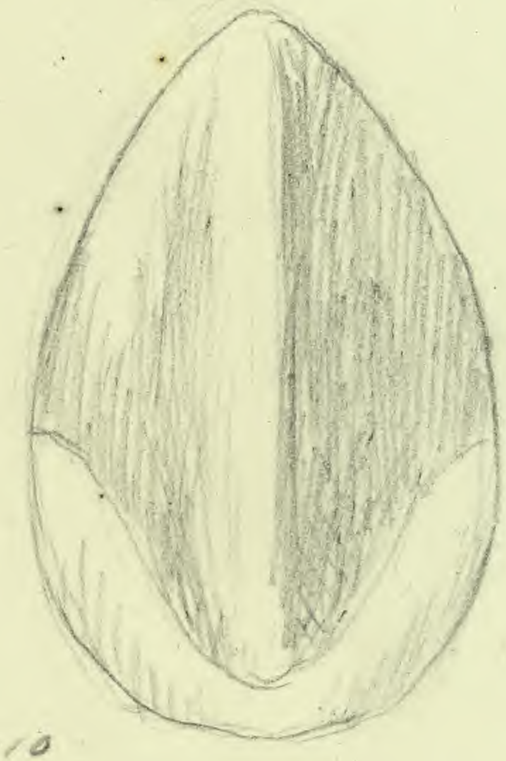
Juniperus occidentalis Jan 10 1874

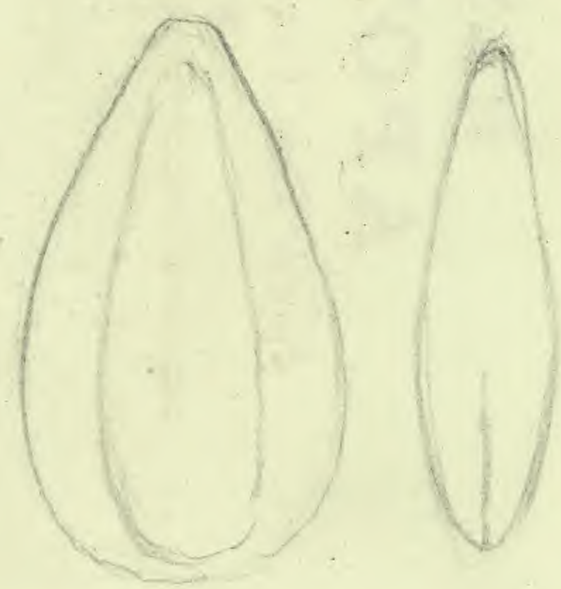
No 2 Colorado Greene Sept 1873
small stout compact tree





Seed x10

x10



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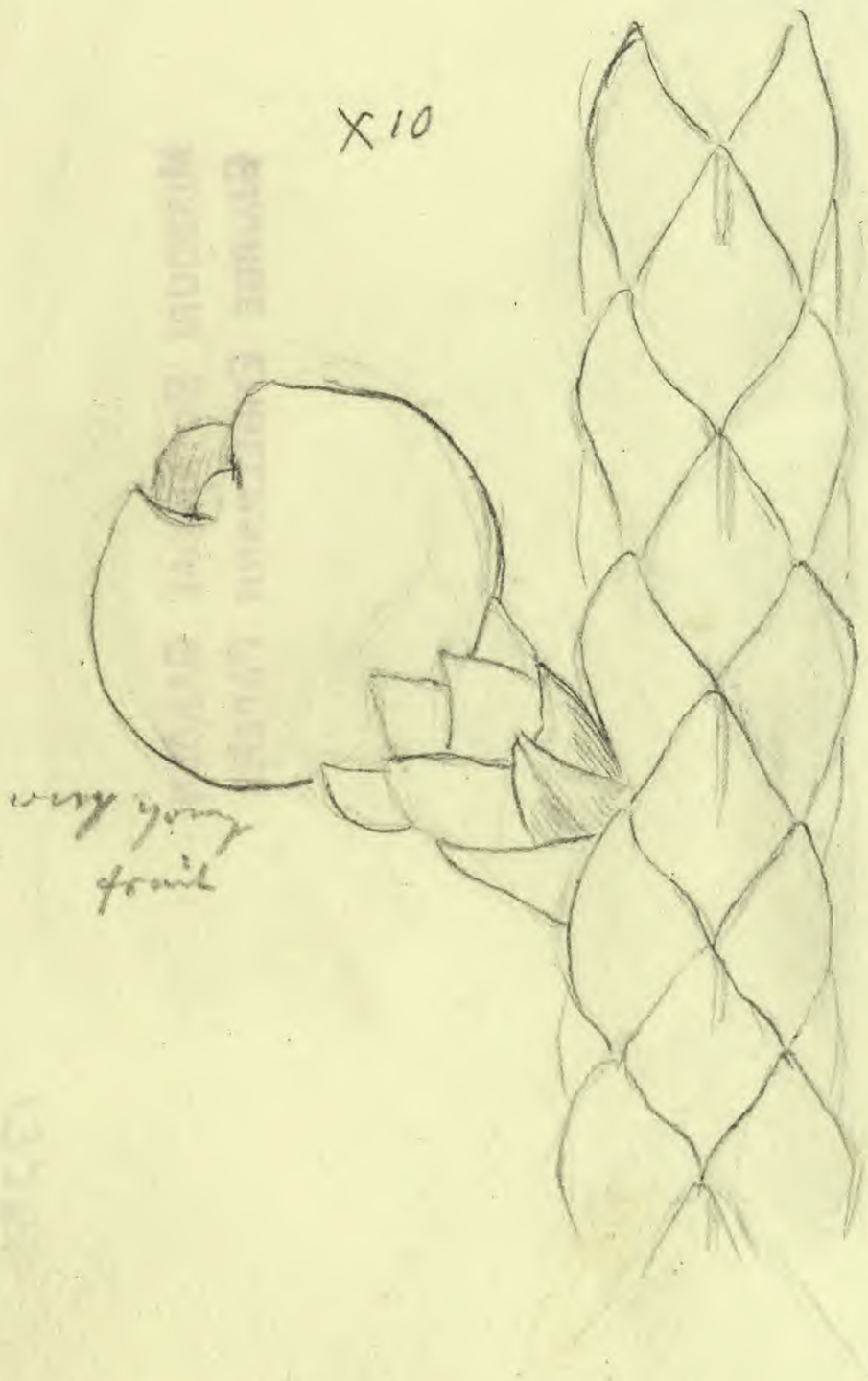
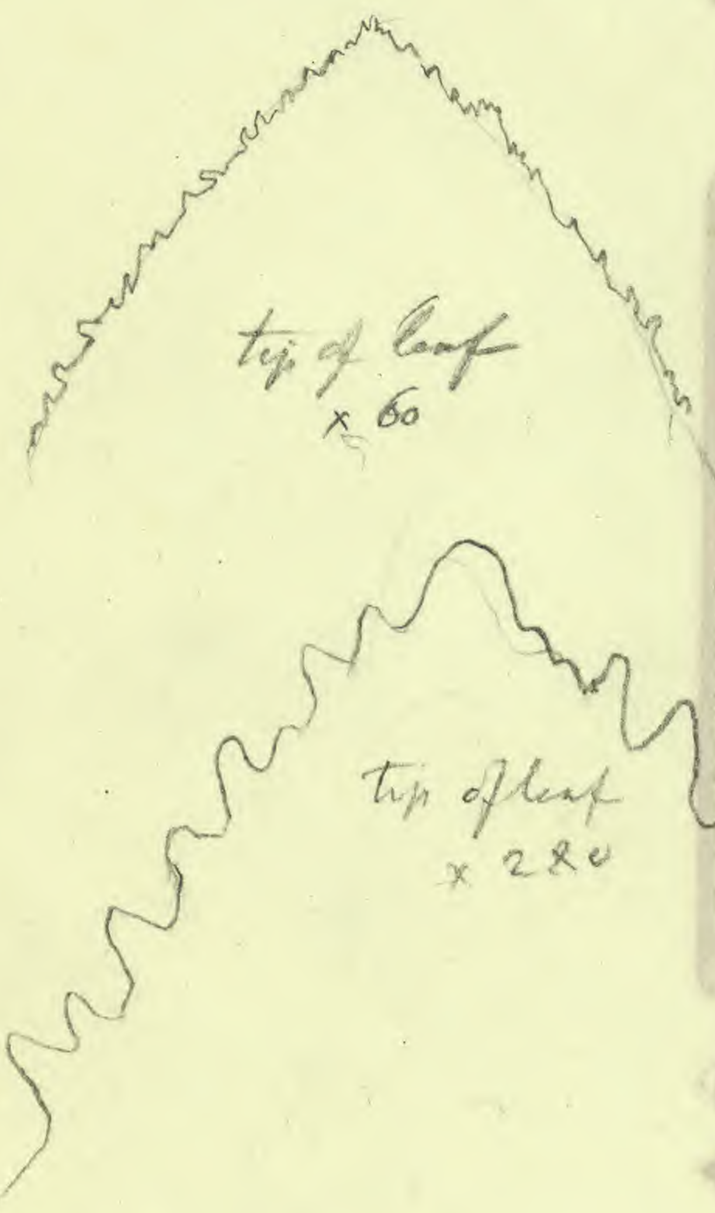
Juniperus

Dec 21 1873

No 1255 California — State Survey Dry hills near Aurora, Nevada
rather a big bush





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tilizers, etc.

Drawing.

Project—Dissertation and drawings, embracing the solution of some problem in engineering, assigned by the Faculty of the School.

DEGREE OF CIVIL ENGINEER.

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Drawing—Use of instruments; prob[illegible]
shadows, perspective, and stone cutting.

SUMMER VACATION.

MEMOIR AND JOURNAL OF TRAVEL.

SECOND YEAR.

Mechanics—Mechanics of solids—mechanics of liquids—mechanics of gases.
Mining Engineering.
Quantitative analysis—Lectures and laboratory practice.
Blowpipe analysis, quantitative—Lectures and laboratory practice.
Metallurgy—General processes, fuels, furnaces, iron and steel.
Geology—Lithological, cosmical, physiographic, historic, and dynamic.
Mineralogy—Determinative mineralogy, and blowpipe examination of minerals.
Physics—undulatory theory of light, Ohm's law, etc.
Drawing—Machines, plans, etc.

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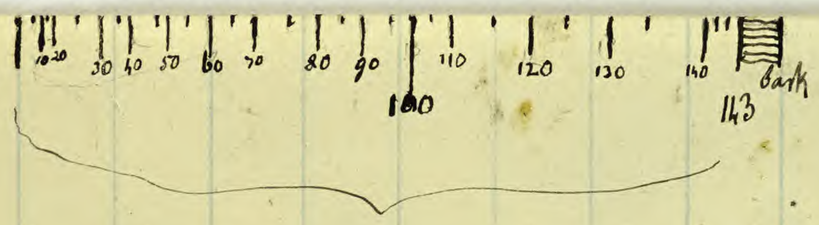


Juniperus Ashei (Buchholz)

New Braunfels, Texas

F. Lindheimer May 1875

Excentric trunk, 143 years old.

general diameter nearly 4 inches, yellowish wood 100 rings, sap 43 rings.

Radius 7 to 33 lines

diameter 34 – 45 lines,

bark 2 – 2½ lines

Wood, 100 years old, 3 – 16 lines radius

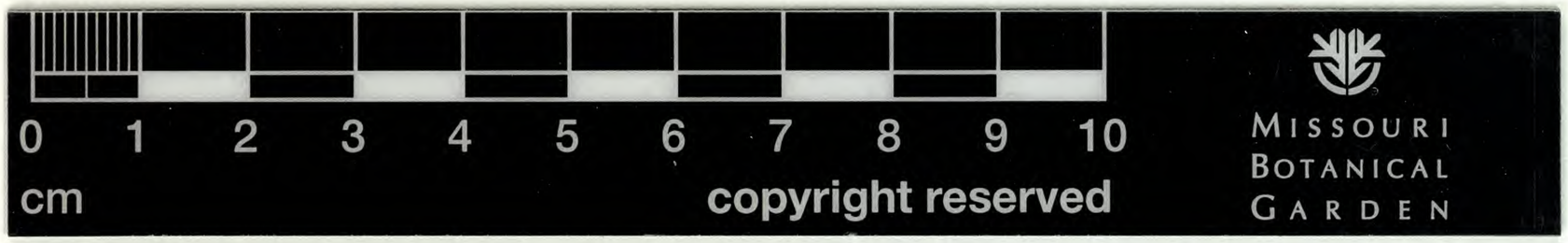
Sap, 43 years old abt 15 lines

smallest rings of wood $\frac{1}{20}$ line, or 0.1 mm. (and smaller yet on the narrow side, where they finally disappear)

largest $\frac{1}{3}$ line — wood rings, therefore $\frac{1}{20} - \frac{1}{3}$ line thick — 0.1 – 0.6 or 0.7 mm

rings of sap, $\frac{1}{10} - \frac{1}{2}$ line (0.5 – 1.0 mm)

= In the first 110 years it grew less rapidly than in the last 33 years — Latest annual rings widest! (perhaps because cattle resided?)



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T. S. Brandegee writes from Canon Jan 16, 1875

Juniperus occidentalis Trunks always excentric, & irregular — branching from the base — Growth apparently from the under and outside of the branches

Wood split irregularly, splinters and slivers — and snaps in open fire places badly —

Berries copper coloured with a light bloom, easily rubbed off — more or less on different bushes, but always the same on the same tree. — bushes full of fruit yet (almost all have fallen by the end of March).

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Juniperus occidentalis, Hook Fl. Bor Am. II. 166. (1840)

fig J. Andina, Nutt Sylva III, 95 t. 110 Rocky Mts, Nutt-H = Hb Gray

Juniperus N=3 S. Wtgreen Rep 1853. p. 173

West Texas Wright 671 ♀ & 672 ♂ = Hb Gray

Organ Mountains Dr Parry (1852)

Valley of the Pecos, Texas, Dr Bigelow 1853, Hb Jom. seed 1 = Tetrago

3 fig ♀ Southern Colorado E.H. Green 1873. Bluffs about Pueble and all over Southern Colorado — A small tree very stout & compact

Foothills of the Green Horn Range of Southern Colorado up to 7000'

shrub 10-15 feet high 1873 (Hay. Haven)

fig Santa Fe, H. Fendler 834. 1847 never over 10-15' high, very common, on dry gravelly hills × fruit sometimes open

fig. 536 & Wislizenus July 1846 small tree, Santa Fe

Juni & Woodhouse in S. Wtgreens Rep. Sept 24 1851 Hb Jom

Juni & Bigelow in Whipples Exped. Nov 24. 1853. Hb Jom

Mountains near Camp Floyd Utah H. Engelm. march 1859

see J. Utahensis fig Salmon trout river, Fremont — seed by fruit larger than usual — very similar to last, large single seeds (Hb Agric. Dep.)

fig. Cosiguriachi & Wislizenus N. 229. common on Mountains and slopes, shrub 10-12 feet high. Octob 1846

1917. Sierras at 7000 a common tree in rocky exposed places in the high Sierras — some trees over 5 feet diam but not high, more rapidly tapering than any other tree Hardwood red & fragrant, but less than J. Virg.

fig. 1855 — Dry hills near Aurora (Nevada) near State Line, common: a low tree 1 to 2 feet diameter, rather a beg bush

611 Summit of Tamalpais March 28 1862 Shrubby 10-15' high

fig 2 "J. occidentalis & Kellogg" Brewer mist — (widely not that pl)

fig 2 or 3 seeds J. occidentalis Hook Fl. Bor. Am.! type = Hb Kew. Columbia upper, Douglas 60-20 feet high. 2-3 feet diam

Arizona, Fort Whipple, Cones & Palmer 1865

Several 2-3 seeded forms. var pleiosperma

2 fig. Monolake & Mono Pass Bolander Sept 1866 2-3 seeds

Klamath region 743 (Hb. Eisenberg) Octob. 25 1852 (Jeffreyi?)

fig Fremont N° 387 & 388 1846 (389. Hb Agric Dep.) Calfornia Exped. Klamath River 2 seeds Hb. Engelm & Torrey

fig Th. Bridges coll N° 328 with protruding berries (Herb Torrey) "California"

fig. Wilkes Expl. Expedit = Hb Agricult. Depart "northern California"

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Dr J. S. Newberry

in Pac. R. Rep. 6. p. 59 t. 10

Juniperus occidentalis Hook F. Bl. 2. 166

—— andina Nutt 3 p. 95 — t. 110

wood white, not at all resembling the dark & fragrant wood of the red Cedar.

Largest trees 3 feet Diam. near base, 40 ft high

Abundant on rocky & barren surfaces east of the Sierra Nevada and the Cascades from Pitt River to the Columbia

no specimen preserved in Herb Agricult Depart 1874

13285

J. C. Kirkbride — APOTHECARY — St. Louis, Mo. — 2348 Olive St.

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Prescribed by

G. ENGELMANN, M. D.,

OFFICE.—S. W. Cor. 5th & Elm Streets.

RESIDENCE.—N. W. Cor. Garrison Ave. & Locust Street.

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